

Health Advisory:

Outbreak of Hepatitis A Virus (HAV) Infections among Persons Who Use Drugs and Persons Experiencing Homelessness

June 14, 2018

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The Missouri Department of Health & Senior Services (DHSS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

Health Alerts convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

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Health Advisory
June 14, 2018

**FROM: RANDALL W. WILLIAMS, MD, FACOG
DIRECTOR**

SUBJECT: Outbreak of Hepatitis A Virus (HAV) Infections Among Persons Who Use Drugs and Persons Experiencing Homelessness

Summary

The Missouri Department of Health and Senior Services (DHSS) in collaboration with several local public health agencies is currently monitoring and responding to a hepatitis A outbreak in Southeast Missouri. From September 1, 2017 to June 13, 2018, 127 confirmed cases of hepatitis A virus infection have been linked to this ongoing outbreak. This Health Advisory alerts local public health agencies (LPHAs), healthcare facilities, and programs providing services to affected populations about these outbreaks of hepatitis A infections and provides guidance to assist in identifying and preventing new infections.*

Background

Hepatitis A infection is a vaccine-preventable illness. The primary means of hepatitis A virus (HAV) transmission in the United States is typically person-to-person through the fecal-oral route (i.e., ingestion of something that has been contaminated with the feces of an infected person).¹ Symptoms include fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice. Although rare, atypical extra hepatic manifestations include rash, pancreatitis, renal disease, arthritis, and anemia.² Severe infections can result in cholestatic hepatitis, relapsing hepatitis, and fulminant hepatitis leading to death.³ Average incubation of HAV is 28 days, but illness can occur up to 50 days after exposure.⁴ An HAV-infected person can be viremic up to six weeks through their clinical course and excrete virus in stool for up to two weeks prior to becoming symptomatic, making identifying exposures particularly difficult.⁵⁻⁷ Illness from hepatitis A is typically acute and self-limited; however, when this disease affects populations with already poor health (e.g., hepatitis B and C infections, chronic liver disease), infection can lead to serious outcomes, including death.

The best way to prevent hepatitis A infection is through vaccination with the hepatitis A vaccine. The number and timing of the doses depends on the type of vaccine administered. Vaccines containing HAV antigen that are currently licensed in the United States are the single-antigen vaccines HAVRIX[®] (manufactured by GlaxoSmithKline) and VAQTA[®] (manufactured by Merck & Co., Inc.) and the combination vaccine TWINRIX[®] (containing both HAV and hepatitis B virus antigens; manufactured by GlaxoSmithKline). All are inactivated vaccines. GamaSTAN S/D (Grifols Therapeutics, Inc.) immune globulin (IG) for intramuscular administration is the only IG product approved for HAV prophylaxis. The efficacy of IG or vaccine when administered >2 weeks after exposure has not been established. Additionally, practicing good hand hygiene—including thoroughly washing hands

*Much of the content in this DHSS Health Advisory was taken from a June 11, 2018, Health Advisory from the Centers for Disease Control and Prevention (CDC). However, the CDC recommendations were modified to correspond to DHSS' current recommendations for Missouri.

after using the bathroom, changing diapers, and before preparing or eating food—plays an important role in preventing the spread of hepatitis A.

From January 2017 to April 2018, the Centers for Disease Control and Prevention (CDC) has received more than 2,500 reports of hepatitis A infections associated with person-to-person transmission from multiple states. Of the more than 1,900 reports for which risk factors are known, more than 1,300 (68%) of the infected persons report drug use (injection and non-injection), homelessness, or both.⁸⁻¹¹ During this time, responses conducted in various states resulted in increased vaccine demand and usage, resulting in constrained supplies of vaccine. As available vaccine supply has increased and progress has been made towards controlling ongoing outbreaks in some jurisdictions, vaccine is more readily available. However, both CDC and vaccine manufacturers continue to closely monitor ongoing demand for adult hepatitis A vaccine in the United States.

During the mid-1980s, drug use was a risk factor for >20% of all hepatitis A cases reported to CDC, but no large outbreaks have occurred among persons who use drugs since adoption of the recommendation for hepatitis A vaccination of persons who use injection and non-injection drugs was made in 1996.^{12,13} Outbreaks of hepatitis A infections among homeless persons have occurred in other countries, but large outbreaks among the homeless have not been described previously in the United States.¹⁴⁻¹⁷

Person-to-person transmission of HAV between persons who report drug use and/or homelessness could result from contaminated needles and other injection paraphernalia, specific sexual contact and practices, or from generally poor sanitary conditions.¹³ Transience, economic instability, limited access to healthcare, distrust of public officials and public messages, and frequent lack of follow-up contact information makes this population difficult to reach for preventive services such as vaccination, use of sterile injection equipment, and case management and contact tracing. These challenges make outbreaks among these groups difficult to control.

Rapid identification, a comprehensive response, and novel public health approaches may be required to address needs unique to these populations. Urgent action is needed to prevent further HAV transmission among these risk groups.

Recommendations for LPHAs

1. Ensure standard operating procedures to identify and interview cases, perform contact tracing for all new hepatitis A diagnoses, and provide post-exposure vaccination of contacts as soon as the diagnosis is made.
2. Remind venues that may encounter undiagnosed infections, such as emergency departments and community-based clinical practices (e.g., family medicine, general medicine) of the importance of reporting hepatitis A infections to the LPHA.¹⁸
3. LPHAs should notify their state health department of any suspected clusters of acute hepatitis A.

Recommendations for Health Care Providers

1. Consider hepatitis A as a diagnosis in anyone with jaundice and clinically compatible symptoms.
2. Encourage persons who have been exposed recently to HAV and who have not been vaccinated to be administered one dose of single-antigen hepatitis A vaccine or immune globulin (IG) as soon as possible, **within 2 weeks after exposure**. Guidelines vary by age and health status (please see <https://www.cdc.gov/hepatitis/outbreaks/InterimOutbreakGuidance-HAV-VaccineAdmin.htm> for additional information).

3. Ensure all persons diagnosed with hepatitis A are reported to the health department in a timely manner.
4. Encourage hepatitis A vaccination for persons who report drug use or other risk factors for hepatitis A.
5. CDC recommends the following groups be vaccinated against hepatitis A:
 - All children at age 1 year
 - Persons who are at increased risk for infection:
 - Persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A;
 - Men who have sex with men;
 - Persons who use injection and non-injection drugs;
 - Persons who have occupational risk for infection;
 - Persons who have chronic liver disease;
 - Persons who have clotting-factor disorders;
 - Household members and other close personal contacts or adopted children newly arriving from countries with high or intermediate hepatitis A endemicity; and
 - Persons with direct contact with persons who have hepatitis A.
 - Persons who are at increased risk for complications from hepatitis A, including people with chronic liver diseases, such as hepatitis B or hepatitis C.
 - Any person wishing to obtain immunity.

For More Information

Questions should be directed to DHSS' Bureau of Communicable Disease Control and Prevention at 573-751-6113 or 800-392-0272 (24/7). For additional information, see:

1. Missouri Department of Health and Senior Services. Hepatitis A-Outbreak Information
<https://health.mo.gov/living/healthcondiseases/communicable/hepatitisa/index.php#outbreak>
2. Centers for Disease Control and Prevention. Division of Viral Hepatitis A Outbreak Website.
<https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm>
3. Centers for Disease Control and Prevention's Hepatitis A Virus Website.
<https://www.cdc.gov/hepatitis/hav/index.htm>
4. Centers for Disease Control and Prevention. Viral Hepatitis Surveillance – United States, 2016.
<https://www.cdc.gov/hepatitis/statistics/2016surveillance/pdfs/2016HepSurveillanceRpt.pdf>
5. Centers for Disease Control and Prevention. Hepatitis A General Information Fact Sheet.
<https://www.cdc.gov/hepatitis/hav/pdfs/hepageneralfactsheet.pdf>

6. Centers for Disease Control and Prevention. The Pink Book. Chapter 9: Hepatitis A.
<https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/hepa.pdf>

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2. Lemon SM, Ott JJ, Van Damme P, Shouval D. Type A viral hepatitis: A summary and update on the molecular virology, epidemiology, pathogenesis and prevention. *J Hepatol* 2017.
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8. California Department of Public Health. Hepatitis A Outbreak in California
<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Hepatitis-A-Outbreak.aspx>
9. Kentucky Department for Public Health. Acute Hepatitis A outbreak Weekly Report.
<https://chfs.ky.gov/agencies/dph/dehp/Documents/Acute%20Hepatitis%20A%20Outbreak%20Week%2021%20Report.pdf>
10. Michigan Department of Health and Human Services. Michigan Hepatitis A 2016-2018 Outbreak Summary.
https://www.michigan.gov/documents/mdhhs/HepA_Summ_County_SEMI2016_updated91517_601552_7.pdf
11. Utah Department of Health. Hepatitis A Outbreak.
http://health.utah.gov/epi/diseases/hepatitisA/HAVoutbreak_2017.
12. Missouri Department of Health and Senior Services. Hepatitis A-Outbreak Information.
<https://health.mo.gov/living/healthcondiseases/communicable/hepatitisa/index.php#outbreak>.
13. Craig AS, Watson B, Zink TK, Davis JP, Yu C, Schaffner W. Hepatitis A outbreak activity in the United States: responding to a vaccine-preventable disease. *Am J Med Sci* 2007; **334**(3): 180-3.
14. Villano SA, Nelson KE, Vlahov D, Purcell RH, Saah AJ, Thomas DL. Hepatitis A among homosexual men and injection drug users: more evidence for vaccination. *Clin Infect Dis* 1997; **25**(3): 726-8.

15. Cheung RC, Hanson AK, Maganti K, Keeffe EB, Matsui SM. Viral hepatitis and other infectious diseases in a homeless population. *J Clin Gastroenterol* 2002; **34**(4): 476-80.
16. Hennessey KA, Bangsberg DR, Weinbaum C, Hahn JA. Hepatitis A seroprevalence and risk factors among homeless adults in San Francisco: should homelessness be included in the risk-based strategy for vaccination? *Public Health Rep* 2009; **124**(6): 813-7.
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19. National Notifiable Diseases Surveillance System. Hepatitis A, Acute 2012 Case Definition. <https://wwwn.cdc.gov/nndss/conditions/hepatitis-a-acute/case-definition/2012/>

Health Advisory:

DHSS Health Advisory for Legionella

December 21, 2018

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Health Advisory
December 21, 2018

**FROM: RANDALL W. WILLIAMS, MD, FACOG
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SUBJECT: DHSS Health Advisory for Legionella

The St. Louis Marriott West hotel in St. Louis County, Missouri is under investigation following two Legionnaire's disease case reports of individuals that stayed at the hotel. Public information released on December 14th and 18th, 2018 directs individuals with symptoms of Legionnaire's disease that have stayed at the hotel within 14 days of illness onset to seek medical care. This health alert provides general guidance for healthcare providers that may see patients who fit these criteria.

Most people with Legionnaires' disease will have pneumonia since the *Legionella* bacteria grow and thrive in the lungs. Legionellosis is not spread from person to person. *Legionella* grow best in warm water sources, such as hot tubs or hot water tanks. The infection is primarily acquired through inhalation of mist or vapor containing the bacteria, or by aspiration of contaminated water into the lungs. Environmental risk factors associated with legionellosis outbreaks are travel, residence in a health care facility, and proximity to cooling towers, whirlpool spas, decorative fountains, and grocery produce misters.

Though most individuals exposed to *Legionella* will not get sick, some persons have an elevated risk of acquiring legionellosis. Such individuals include those with the following risk factors:

- Age of 50 years or older
- Diabetes
- Current or former smoker
- Chronic lung disease
- Weakened immune system, including recipients of a transplant or chemotherapy

The most commonly used laboratory test for diagnosis of Legionnaires' disease is the urinary antigen test, which detects a molecule of the *L. pneumophila* serogroup 1 in urine. *L. pneumophila* serogroup 1 is the serogroup that most commonly causes disease. Along with the urinary antigen test, isolation of the bacteria via culture of respiratory secretions, lung tissue, pleural fluid, or a normally sterile site is highly recommended since culture is a preferred diagnostic modality. Sputum should ideally be obtained prior to antibiotic administration, but antibiotic treatment should not be delayed.

The Infectious Disease Society of America (IDSA) guidelines recommend fluoroquinolone or azithromycin, as preferred, and doxycycline as an alternative treatment.

Legionellosis is a reportable disease in Missouri. All known or suspected cases should be reported to the local public health agency, or to DHSS at 573/751-6113 or 800/392-0272 (24/7). Questions should be directed to DHSS' Bureau of Communicable Disease Control and Prevention at 573/751-6113. To view the press releases regarding this current investigation, please see the following links:

- December 14, 2018: https://health.mo.gov/information/news/2018/dhss_121418
- December 19, 2018: https://health.mo.gov/information/news/2018/dhss_121918